**Application No.:** 10/735,936

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in

the application:

**Listing of Claims:** 

1-9. (Canceled).

10. (Currently Amended) A first wireless transmit/receive unit (WTRU)

capable of canceling interference from a second WTRU in a neighboring cell, the

first WTRU comprising:

an antenna configured to receive for receiving signals including a first signal

of the first WTRU, a second signal of a device other than the WTRU, the second

WTRU and a third signal indicating a code of the second signal;

a sampling device configured to sample the first, second and third signals

from the antenna and produce a received vector;

a signal receiver configured to determine for-determining the second signal

code using the received third signal;

an interference canceller configured to cancel for canceling the second signal

from the received vector, producing an interference canceled signal; and

- 2 -

**Applicant:** Martin J. Dowling **Application No.:** 10/735,936

a data detection device having an input configured to receive the interference canceled signal for recovering data of the first signal.

11. (Currently Amended) The first WTRU of claim 10 wherein the interference canceller includes:

a second code generation device <u>configured to produce</u> for <u>producing</u> a code of the second signal;

a weighting device, coupled to a root mean squares (RMS) measuring device, configured to weight for weighting the produced code;

a subtractor <u>configured to subtract</u> for <u>subtracting</u> the weighted produced code from the received signals, producing a subtracted signal;

the RMS measuring device <u>configured to measure</u> for measuring a RMS of the subtracted signal; and

a data detector having an input configured to receive the subtracted signal for detecting data of the first signal.

12. (Currently Amended) The first WTRU of claim 10 wherein the interference canceller includes;

a second WTRU joint detector <u>configured to detect</u> for <u>detecting</u> data of the second signal using the second code;

Applicant: Martin J. Dowling Application No.: 10/735,936

an interference reconstruction device <u>configured to produce</u> for <u>producing</u> a contribution of the second signal to the received signals;

a subtractor <u>configured to subtract</u> for <u>subtracting</u> the second signal contribution from the received signals, producing a subtracted signal; and

a joint detector having an input configured to receive the subtracted signal and for detecting data of the first signal.

13-15. (Canceled).